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CONSIDERATION OF PLANS AND PROGRAMMES TO SUPPORT THE SUSTAINABLE DEVELOPMENT OF SMALL ISLAND DEVELOPING STATES AND THE UTILIZATION OF THEIR MARINE AND COASTAL RESOURCES, WHICH INCLUDES MEETING ESSENTIAL HUMAN NEEDS, MAINTAINING BIODIVERSITY, AND IMPROVING THE QUALITY OF LIFE FOR ISLAND PEOPLE, AS WELL AS MEASURES THAT WILL ENABLE SMALL ISLAND DEVELOPING STATES TO COPE EFFECTIVELY, CREATIVELY AND IN A SUSTAINABLE MANNER WITH ENVIRONMENTAL CHANGES AND TO MITIGATE THE IMPACTS ON AND REDUCE THE THREATS POSED TO MARINE AND COASTAL RESOURCES

Draft programme of action for the sustainable development of small island developing States

Note by the Secretariat

The draft programme of action for the sustainable development of small island developing States contained in the present document is based on the draft text contained in the report of the Preparatory Committee for the Global Conference on the Sustainable Development of Small Island Developing States (A/48/36, part two, annex III), as amended by the Preparatory Committee at its resumed first session, held in New York from 7 to 11 March 1994. It is submitted to the Conference for its consideration and appropriate action pursuant to Preparatory Committee decision 19 of 11 March 1994. Text that has not been agreed on is shown in square brackets.

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PREAMBLE

1. In 1992, at the United Nations Conference on Environment and Development (UNCED), the world community adopted Agenda 21. 1/ Agenda 21 reflects a global consensus and political commitment at the highest level on development and environment cooperation. The cooperation of all States is a prerequisite for the fulfilment of the objectives of Agenda 21, and must also respond to the special circumstances and particular vulnerabilities of countries through adequate and specific approaches.

[The Conference is the first global conference on sustainable development and the implementation of Agenda 21.]

[The programme of action identifies specific actions necessary to address the special challenges faced by small island developing States. In fulfilling those actions, several general cross-cutting areas - capacity-building, including human resource development, national institutions and administrative capacity-building; technology cooperation; and trade and economic diversification - are identified.]

2. [The Rio Declaration on Environment and Development 2/ identifies human beings as being at the centre of concerns for sustainable development. Development initiatives in small island developing States should be seen in relation to the needs of human beings, their families, their values, their unique social, religious and cultural heritage, and their responsibility towards present and future generations.] Small island developing States have valuable resources, including oceans, coastal environments, biodiversity and, most importantly, their human resources. Their potential is recognized, but the challenge for small island developing States is to ensure that they are used in a sustainable way for the well-being of present and future generations. ... Although they are afflicted by economic difficulties and confronted by development imperatives similar to those of developing countries generally, small island developing States also have their own peculiar vulnerabilities and characteristics, so that the difficulties they face in the pursuit of sustainable development are particularly severe and complex.

3. There are many disadvantages which derive from small size. These are magnified by the fact that many island States are not only small but are themselves made up of a number of small islands. Disadvantages include a narrow range of resources, which forces undue specialization; excessive dependence on international trade and hence vulnerability to global developments; high population density, which increases the pressure on already limited resources; overuse of resources and premature depletion; relatively small watersheds and threatened supplies of fresh water; costly public administration and infrastructure, including transportation and communication; and limited institutional capacities and domestic markets, which are too small to provide significant scale economies, while their limited export volumes, sometimes from remote locations, lead to high freight costs and reduced competitiveness. Small islands tend to have high degrees of endemism and levels of biodiversity, but

the relatively small numbers of the various species impose high risks of extinction and create a need for protection.

4. The small size of small island developing States means that development and environment are closely interrelated and interdependent. Recent human history contains examples of entire islands rendered uninhabitable through environmental destruction [caused by external interventions]; small island developing States are fully aware that the environmental consequences of ill-conceived development can have catastrophic effects. Unsustainable development threatens not only the livelihood of people but also the islands themselves and the cultures they nurture. Climate change, climate variability and sealevel rise are issues of grave concern. Similarly, the biological resources on which small island developing States depend are threatened by the large-scale exploitation of marine and terrestrial living resources.

5. Many small island developing States are entirely or predominantly coastal entities. Due to the small size, isolation and fragility of island ecosystems, their renowned biological diversity is among the most threatened in the world. This requires that in pursuing development, special attention be paid to protecting the environment and people's livelihoods. It also requires the integrated management of resources.

[6. Small island developing States are entirely or predominantly marine and coastal entities and, as such, have valuable resources including oceans, coastal environments, biodiversity and most importantly human resources. Small island developing States are in effect custodians of, and have responsibility for, a large part of the Earth's marine environment, thereby covering about one-fifth of the surface of the planet. The potential thereof is recognized, but the challenge for small island developing States is to ensure that those resources are developed and used in a sustainable way for the well-being of present and future generations. Although they are afflicted by economic difficulties and confronted by development imperatives similar to those of developing countries generally, small island developing States also have their own peculiar sets of vulnerabilities and characteristics, so that the difficulties they face in the pursuit of sustainable development are particularly severe and complex.]

7. In some small island developing States, the rate of population growth exceeds the rate of economic growth, placing serious and increasing pressure on the capacity of those countries to provide basic services to their peoples, and placing a high burden on women in particular as heads of households. [However, while in some cases population density may be high, many small island developing States have small populations in absolute terms, insufficient to generate economies of scale.] Although their population density may be high, many small island developing States have small populations in absolute terms and thus limited scope for the full utilization of certain types of highly specialized expertise. They experience high levels of migration, particularly of skilled human resources, which not only places undue burden on training facilities but forces small island developing States to import high-cost foreign expertise.

8. The lack of opportunities for achieving economies of scale, together with their narrow resource base, tends to limit the total production of small island developing States to a narrow range of crops, minerals and industries, both manufacturing and services. Any adverse development concerning these productive sectors, whether arising from market factors, natural or environmental constraints, is likely to lead to significant reductions in output, a fall in foreign-exchange earnings and increased unemployment.

9. Partly because of their small size and partly because of their vulnerability to natural and environmental disasters, most small island developing States are classified as high-risk entities, which has led to insurance and reinsurance being either unavailable or exorbitantly expensive, with adverse consequences for investment, production costs, government finances and infrastructure.

10. Because the per capita income of many small island developing States tends to be higher than that of developing countries as a group, [they have been excluded from access to] [they may have limited access to] concessionary resources. Analysis of the economic performance of small island developing States, however, suggests that current incomes are often facilitated by migrant remittances, preferential market access for some major exports and assistance from the international community. These sources are neither endogenous nor secure. Furthermore, incomes of [some] small island developing States have [generally been unsustainable over time] [tended to be unstable]: natural and man-made disasters, difficulties in the international market for particular commodities and recession in some developed economies [often] [may] reduce incomes in small island developing States dramatically, sometimes by as much as 20 to 30 per cent of gross domestic product (GDP) in a single year.

11. Because small island development options are limited, they present special challenges to planning for and implementing sustainable development. To meet that challenge, the most valuable asset of small island developing States is their human resources, which need to be given every opportunity to fulfil their potential and contribute meaningfully to national, regional and international development consistent with the Rio Declaration and Agenda 21. Small island developing States will be constrained in meeting those challenges without the cooperation and assistance of the international community. The sustainable development of small island developing States requires actions that address the above constraints to development. Those actions should integrate environmental considerations and natural resource conservation objectives and gender considerations consistent with the Rio Declaration and Agenda 21, into the development of social and economic development policies in international, regional, subregional and/or bilateral cooperative programmes related to islands.

[UNCED specifically reaffirmed women's critical contributions to sustainable development, and endorsed chapter 24 of Agenda 21, containing recommendations to strengthen the role of women in the decision-making process and to eliminate all obstacles to their equal participation in, and benefits from, the sustainable development of their particular societies.]

12. Sharing a common aspiration for economic development and improved living standards, small island developing States are determined that the pursuit of material benefits should not undermine social, religious and cultural values nor cause any permanent harm to their peoples or to the land and marine resources which have sustained island life for many centuries. In Agenda 21, the international community committed itself to:

(a) Adopt and implement plans and programmes to support the sustainable development and utilization of their marine and coastal resources, including meeting essential human needs, maintaining biodiversity and improving the quality of life for island people;

(b) Adopt measures which will enable small island developing States to cope effectively, creatively and sustainably with environmental change and to mitigate impacts and reduce threats posed to marine and coastal resources.

Those commitments were later incorporated into General Assembly resolution 47/189 of 22 December 1992, which called for a Global Conference on the Sustainable Development of Small Island Developing States.

13. In establishing the new global partnership for sustainable development, countries have recognized the [special situation and needs of developing countries, particularly the least developed and those most environmentally vulnerable shall be given special priority] need for special priority to be given to those that are most environmentally vulnerable. Under chapter 17G of Agenda 21, small island developing States and islands supporting small communities are recognized as a special case for both environment and development, because they are ecologically fragile and vulnerable and their small size, limited resources, geographic dispersion and isolation from markets all place them at a disadvantage economically and prevent economies of scale.

14. It is in that context that the following programme of action addresses the special challenges and constraints facing small island developing States. Because sustainable development is a process, not a phenomenon, the programme of action focuses on the next steps that can be taken along the comprehensive path to sustainable development which will follow the principles endorsed by Governments at UNCED. The programme of action contains a synopsis of actions and policies that should be implemented over the short, medium and long term. [Those actions and policies are elaborated in greater detail in the reports of the regional technical meetings, which contain a broader collection of actions that will be required over the longer term.]

15. [As recognized in Agenda 21, Governments will be primarily responsible for the implementation of the programme of action.] The programme of action presents a basis for action in 15 agreed priority areas and defines a number of actions and policies related to environmental and development planning that should be undertaken by small island developing States with the cooperation and assistance of the international community. [In general, financing for the implementation of the programme of action will come from countries' own public and private sectors.] Elements for inclusion in the medium- and long-term

sustainable development plans of small island developing States are recommended, along with the necessary measures for enhancing their endogenous capacity. Regional approaches to sustainable development/environment problems and technical cooperation for endogenous capacity-building are proposed; and the role of the international community is outlined, [including access to adequate, predictable, new and additional financial resources [and better use of existing resources] and mechanisms in accordance with chapter 33 of Agenda 21,] and measures for endogenous capacity-building, in particular for developing human resources and promoting access by small island developing States to environmentally sound and energy-efficient technology for their sustainable development. In that context, non-governmental organizations and other major groups should be fully involved.

[16. In the implementation of the relevant programme areas, special attention should be given to the specificity of individual countries or groups of countries among the small island developing States. In providing support to the small island developing States, the international community should pay special attention to the needs of the least developed countries amongst them.]

I. CLIMATE CHANGE AND SEALEVEL RISE

Basis for action

17. Small island developing States are particularly vulnerable to global climate change, climate variability and sealevel rise. As most populations, agricultural lands and infrastructures of small island developing States exist in the coastal zone, any rise in sealevel will have significant and profound effects on the economies and on the living conditions of the population of those countries. The very survival of certain low-lying countries would be threatened by sealevel rise. Inundation of outlying islands and loss of land above the high-tide mark may result in loss of exclusive economic rights over extensive areas and in the destruction of existing economic infrastructure as well as of existing human settlement. Global climate change may damage coral reefs, alter the distribution of zones of upwelling and may affect both subsistence and commercial fisheries production. Further, it may impact on vegetation and saline intrusion may adversely affect freshwater resources. The increased frequency and intensity of storm events that may result from climate change will also have profound effects on both the economies and the environments of small island developing States. All of the necessary information is required concerning all these aspects of climate change as it may affect small island developing States to enable appropriate response strategies to be developed and implemented.

18. The process established by the Framework Convention on Climate Change and the ongoing negotiations of its Intergovernmental Negotiating Committee are important international actions aimed at addressing the threat of climate change, mitigating its adverse impacts on small island developing States and assisting them in adapting to the adverse consequences. It is becoming clear that the commitments contained in Article 4.2 (a) and (b), in particular those

related to emissions of greenhouse gases, should be considered inadequate for the long term and further action may be required to make satisfactory progress towards achieving the objective of the Convention. In that regard, the consideration at the first meeting of the Conference of the Parties of the adequacy of those and all other relevant commitments under the Convention, in particular those aimed at achieving effective adaptive response measures, is of the utmost importance to small island developing States and the international community. The development and use of renewable sources of energy and the dissemination of sound and efficient energy technologies are seen as having a central role in mitigating the adverse impact of climate change.

A. National action, policies and measures

(i) Ensure early ratification or accession to the Framework Convention on Climate Change, the Montreal Protocol and other related legal instruments.

(ii) Monitor, survey and collect data on climate change and sealevel rise.

(iii) Formulate comprehensive adjustment and mitigation policies for sealevel rise in the context of integrated coastal area management.

(iv) Assess the effects and the socio-economic implications of the impact of climate change, climate variability and sealevel rise on small island developing States.

(v) Map areas vulnerable to sealevel rise and develop computer-based information systems covering the results of surveys, assessments and observations as part of the development of adequate response strategies, adaptation policies and measures to minimize the impact of climate change, climate variability and sealevel rise.

(vi) Improve public and political understanding of the potential impacts of climate change.

(vii) Formulate comprehensive strategies and measures (including preparation for, the facilitation of and the collection of information) on adaptation to climate change that would contribute to a better understanding of the range of issues associated with the development of methodologies to facilitate adequate adaptation to climate change.

(viii) Promote more efficient use of energy resources in development planning and use appropriate methods to minimize the adverse effects of climate change on the sustainable development of these resources.

(ix) Increase participation in bilateral, regional and global research, assessment, monitoring and mapping of climate impacts, including oceanographic and atmospheric measures and policies and the development of response strategies.

B. Regional action

(i) Create, and/or strengthen, programmes and projects to monitor and improve predictive capacity for climate change, climate variability and sealevel rise and to assess the impacts of climate change on marine resources, freshwater and agricultural production, including pests.

(ii) Develop and/or strengthen mechanisms to facilitate the exchange of information and experiences between small island developing States, and to promote technology transfer and training in small island developing States in response to climate change, including preparedness response.

(iii) Provide technical assistance for ratification or accession to the Framework Convention on Climate Change and assist those Parties which have ratified the Convention to assume their major responsibilities under it.

(iv) Support national efforts aimed at developing strategies and measures on adaptation to climate change as well as the development of technical guidelines and methodologies to facilitate adequate adaptation to climate change.

C. International action

(i) Implement immediately the prompt-start resolution agreed to by the Intergovernmental Negotiating Committee for a Framework Convention on Climate Change.

(ii) Support small island developing States in responding to the call by the Intergovernmental Panel on Climate Change for vulnerable coastal nations to develop integrated coastal zone management plans, including the development of adaptive response measures to the impacts of climate change and sealevel rise.

(iii) Provide improved access to financial and technical resources for monitoring climate variability and change and sealevel rise, for assessment of the impacts of climate change, and for the timely development and implementation of response adaptation strategies, recognizing the specific vulnerabilities and disproportionate cost borne by small island developing States.

(iv) Provide improved access to information from the activities carried out to reduce uncertainties of climate change and assist the inter-island exchange of this information.

(v) Provide access to environmentally sound and energy efficient technology to assist small island developing States conserve energy.

(vi) Support the activities of intergovernmental, regional and subregional organizations aimed at assisting small island developing States in coping effectively and creatively with climate change, climate variability and sealevel rise, including providing systems for systematic and continuous research, monitoring, surveying and data collection, as well as assessment of climate change, climate variability and sealevel rise, coral reefs, the role of oceans in the world climate, tidal variations and the salt water intrusion of freshwater.

(vii) Provide improved access to financial and technical resources to assist small island developing States, which are particularly vulnerable to the adverse effects of climate change, in meeting the costs associated with the development of national and regional strategies, measures and methodologies to facilitate adequate adaptation to climate change.

II. NATURAL AND ENVIRONMENTAL DISASTERS

Basis for action

19. Small island developing States are prone to extremely damaging natural disasters, primarily in the form of cyclones, volcanic eruptions and earthquakes. In some islands, the range of these disasters includes storm surges, landslides, extended droughts and extensive floods. A recent study by the former Office of the United Nations Disaster Relief Coordinator (currently the Department of Humanitarian Affairs of the United Nations Secretariat) has shown that at least 13 of the 25 most disaster-prone countries are small island developing States. Due to climate change, such events, including drought, are perceived to be occurring with increasing frequency and intensity. These natural disasters are of special concern to small island developing States because of their small size, narrow resource base and the pervasive impact of such events on their economies, including loss of insurance coverage. For those affected by these natural disasters, these particular characteristics mean that the economic, social and environmental consequences are long-lasting and the costs of rehabilitation are high as a percentage of gross national product. For similar reasons the impact of oil-spills and other environmental disasters can also be severe.

A. National action, policies and measures

(i) Establish and/or strengthen disaster preparedness and management institutions and policies, including building codes and regulatory and enforcement systems, to mitigate, prepare for and respond to the increasing range and frequency of natural and environmental disaster- and promote early warning systems and facilities for the rapid dissemination of information and warnings.

(ii) Strengthen the capacity of local broadcasting to assist remote atolls in the country and neighbouring countries during disaster events.

(iii) Establish a national disaster emergency fund with joint private and public sector support for areas where insurance is not available in the commercial market, taking into account the relevant experience to be gained from the operation of similar funds.

(iv) Integrate natural and environmental disaster policies into national development planning and encourage the development of public and private sector disaster recovery plans, within the framework of the Office of the Department of Humanitarian Affairs of the United Nations Secretariat by the year 2000.

(v) Strengthen cultural and traditional systems that improve the resilience of local communities to disaster events.

B. Regional action

(i) Establish and/or strengthen, where appropriate, regional institutions to complement and support national efforts in disaster mitigation, preparedness and management.

(ii) Establish and/or strengthen, where appropriate, mechanisms for sharing experience, information and resources, including expertise, between small island developing States.

(iii) Increase access to telecommunication links and satellite facilities for disaster monitoring, assessment and information exchange.

(iv) Establish and/or strengthen existing regional mechanisms and communication systems for rapid response to disasters.

(v) Support the operation of a national disaster emergency fund, taking into account the relevant experience to be gained from the operation of similar funds, as well as the enactment of standardized building codes and relevant legislation.

C. International action

(i) Assist small island developing States to establish national and regional institutional mechanisms and policies to reduce the impacts of natural disasters, improve disaster preparedness and integrate natural disaster considerations in development planning, including through access to resources for disaster mitigation, preparedness, response and recovery.

(ii) Improve access to technology and relevant training to assist with hazard and risk assessment and early warning systems, and to assist with the protection of islands from environmental disasters consistent with national and regional strategies for disaster management.

(iii) Support and coordinate disaster warning and preparedness with the World Meteorological Organization and other relevant international organizations.

(iv) Encourage the International Decade for Natural Disaster Reduction and the World Conference on Natural Disaster Reduction, which will be held in May 1994, to give special recognition to small island developing States so that their unique characteristics will be taken into account in developing natural disaster reduction management programmes.

III. MANAGEMENT OF WASTES

Basis for action

20. The limited land areas and resources for safe disposal, growing populations and increasing imports of polluting and hazardous substances combine to make pollution prevention and the management of wastes a critical issue for small island developing States. Wastes in small island developing States tend to be highly visible, but due to their limited capacity to monitor the waste stream the true extent of the problem remains poorly understood. For small island developing States, the disposal of wastes is a serious constraint to sustainable development. Both land and sea-based sources of pollution require urgent attention.

21. All small island developing States share the problem of safely disposing of solid and liquid wastes, particularly as a result of urbanization, resulting in contamination of groundwater and lagoon areas. Point source pollution from industrial wastes and sewage, inappropriately sited and poorly managed garbage dumps and disposal of toxic chemicals are significant contributors to marine pollution and coastal degradation. Limited land areas makes the option of landfill disposal unsustainable in the long term. Incineration, while reducing the volume of wastes, is prohibitive in terms of cost and still requires disposal of ash containing potentially hazardous substances in high concentrations. Pressure on forests to provide fuelwood and to expand agricultural development together with a high use of agricultural chemicals also aggravate downstream pollution and sedimentation problems.

22. There is also growing concern about the transboundary movement of toxic and hazardous waste, including the use of small island developing States for the disposal of waste generated by other countries. The isolation and oceanic location of small island developing States and their dependence on a marine and limited terrestrial resource base make them highly vulnerable to contamination by toxic and hazardous wastes and chemicals, and radioactive materials. The passage of ships carrying toxic and hazardous wastes, chemicals and radioactive materials [through the seas of small island developing States is of priority concern].

23. Given that long-term disposal options are limited and will constrain sustainable development, small island developing States will need to look for ways of minimizing wastes and/or converting wastes, such as sewage, into a resource (e.g. fertilizer for agriculture). This will include action ranging from limiting imports of non-biodegradable and hazardous substances to changing community attitudes to the disposal and use of sewage. In the short term, existing wastes require effective disposal, but at the same time incentives to continue waste generation should be avoided.

A. National action, policies and measures

(i) Develop fiscal and policy incentives and other measures to encourage environmentally sustainable imports and local products with low waste or degradable waste content.

(ii) Develop and implement appropriate regulatory measures, including emission discharge and pollution standards, for the reduction, prevention, control and monitoring of pollution from all sources and for the safe and efficient management of toxic, hazardous and solid wastes, including sewage, herbicides, pesticides and industrial and hospital effluent, together with proper management of disposal sites.

(iii) Ratify and implement relevant conventions, including the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal 3/ and the London Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Convention of 1972), 4/ and relevant regional conventions.

(iv) Formulate and implement public awareness and education campaigns designed to gain local recognition of the need to control wastes at the source, the value of reuse and recycling, of appropriate packaging, and of the possibilities of converting wastes to resources in culturally appropriate ways.

(v) Introduce clean technologies and treatment of waste at the source and appropriate technology for solid waste treatment.

(vi) Develop information systems and baseline data for waste management and pollution control, monitoring the types and quantities of wastes, for both sea and land-based sources of pollution.

(vii) Establish port reception facilities for the collection of waste in accordance with annex V of the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78). 5/

B. Regional action

(i) Develop regional pollution prevention programmes, including regional centres for pollution prevention, involving demonstration projects, workshops and multimedia presentations tailored to specific groups,

the development of economic incentives to further pollution prevention and waste management, relevant legislation, a coordinated and focused monitoring programme and, where appropriate, the development of waste management and prevention trust funds.

(ii) Remove and dispose of existing hazardous wastes, such as polychlorinated biphenyls, with the technical assistance of developed countries.

(iii) Establish clearing-houses and increase the collection and synthesis of data and information on the sources, levels, amounts, kinds, trends and effects of pollution and waste on marine and coastal systems, and on processes and technology to address pollution control from land and sea-based sources.

(iv) Establish regional mechanisms, including conventions where appropriate, to protect the oceans, seas and coastal areas from ship-generated waste, oil spills and the transboundary movement of toxic and hazardous waste, consistent with international law.

(v) Examine ways to resolve disputes concerning waste disposal practices affecting small islands and encourage a collaborative examination of the issues of liability and redress in the context of the Basel Convention.

(vi) Facilitate the formulation and implementation of public awareness and education campaigns designed to gain local recognition of the need to control wastes at the source, the value of reuse and recycling, of appropriate packaging, and of the possibilities to convert wastes to resources in culturally appropriate ways.

C. International action

(i) Support the strengthening of national and regional capabilities to carry out pollution monitoring and research and to formulate and apply pollution control and abatement measures.

(ii) Support the strengthening of institutions to provide assistance to Governments and industry in the adoption of clean production technologies as well as for the prevention of pollution and in the handling, treatment and disposal of hazardous wastes.

(iii) Accept the right of small island developing States to regulate, restrict and/or ban the importation of products containing non-biodegradable and/or hazardous substances and to prohibit the transboundary movement of hazardous and radioactive wastes and materials within their jurisdiction, consistent with international law.

(iv) Ensure that the international conventions and arrangements and related negotiations on marine pollution, in particular any amendments to the London Convention of 1972 but also in relation to land-based sources of marine pollution, take into account the interests and capacities of small island developing States.

(v) Support measures to assist small island developing States in improving their capacity for negotiation, for follow-up and for implementation of international conventions or arrangements, as well as for related negotiations on marine pollution, in particular any amendments to the London Convention of 1972 but also in relation to land-based sources of marine pollution.

(vi) Assist the implementation of monitoring and pollution prevention programmes and the establishment of port reception facilities for the collection of waste in accordance with annex 5 of MARPOL 73/78.

(vii) Enhance international cooperation in the establishment of waste management facilities, the control of toxic chemicals and pollution prevention as components of international investment projects, whether funded by multilateral or private sources.

(viii) Assist small island developing States to assess the impact of land-based sources of marine pollution and to develop mechanisms to eliminate or minimize the pollution source.

(ix) Provide improved access to resources for national and regional efforts to formulate and implement public awareness and education campaigns designed to gain local recognition of the need to control wastes at the source, the value of reuse and recycling and of appropriate packaging, and of the possibilities for converting wastes to resources in culturally appropriate ways.

(x) Ensure that the Basel Convention experts group developing guidelines for monitoring the effects of the management of hazardous wastes on human health and the environment takes into account the concerns of small island developing States.

IV. COASTAL AND MARINE RESOURCES

Basis for action

24. Sustainable development in small island developing States depends largely on coastal and marine resources. Their small land area means that these States are effectively coastal entities. Population and economic development - both subsistence and cash - are concentrated in the coastal zone. The establishment of the 200-mile exclusive economic zone has vastly extended the fisheries and other marine resources available to small island developing States. Their high

dependence on coastal and marine resources emphasizes the need for appropriate and effective management.

25. The development and management of programmes designed to achieve ecologically and economically sustainable utilization of coastal and marine resources are major challenges for small island developing States. The lack of an integrated approach to coastal and marine area management has limited the effectiveness of past and present management measures. This is increasingly resulting in coastal habitats being degraded through pollution, natural resources being over-exploited and growing conflicts between competing resource uses. Development patterns have also had an adverse impact on traditional management systems. In many cases these impacts have been exacerbated by the effects of natural hazards and extreme events, such as hurricanes/cyclones/typhoons, storm surges and abnormally high tides.

A. National action, policies and measures

(i) Establish and/or strengthen, where appropriate, institutional, administrative and legislative arrangements for the development of integrated coastal zone management plans and strategies for coastal watersheds and exclusive economic zones and their implementation, including integration within national development plans.

(ii) Design comprehensive monitoring programmes for coastal and marine resources, including wetlands, to determine shoreline and ecosystem stability, and document and apply traditional knowledge and management practices which are ecologically sound and include the participation of local communities, as a basis for integrated coastal zone planning and decision-making.

(iii) Develop and/or strengthen national capabilities for the sustainable harvesting and processing of fishery resources and provide training and awareness programmes for the managers (government and local communities) of coastal and marine resources.

(iv) Ratify and/or adhere to regional and international conventions concerning protection of coastal and marine resources and combat unsustainable fishing and related practices.

B. Regional action

(i) Develop and/or strengthen the capacity of regional organizations to undertake activities in coastal and marine areas, including to research commercial and non-commercial fisheries with a view to sustainable harvesting and utilization, and surveys on reef, estuary and lagoon resources; and monitor and promote innovative ways to sustainably develop territorial waters and exclusive economic zones, including support for aquaculture, mariculture, coral reef and mangrove programmes.

(ii) Develop methodology for integrated coastal zone management appropriate to small island developing States, particularly very small, low elevation and coral islands.

(iii) Develop and/or strengthen regional clearing-houses for coastal and marine environmental information to facilitate the collection, synthesis and sharing of relevant information, knowledge and experience among small island developing States in a structured and systematic way.

(iv) Develop programmes to enhance negotiating and related skills for the management and exploitation of coastal and marine resources, including the negotiation of fisheries agreements.

(v) Develop and/or strengthen regional capabilities for the effective surveillance and monitoring of activities in the exclusive economic zones of small island developing States.

(vi) Harmonize policies and strategies for coordination of the sustainable management and utilization of coastal and marine resources.

C. International action

(i) Develop mechanisms for the gathering and sharing of information and expertise, particularly interregionally between small island developing States, including geographic information systems (GIS) techniques and facilities for the assessment of coastal and marine resources, including the regional nodes of the UNEP Global Resource Information Database.

(ii) Cooperate in facilitating mutually advantageous fishing agreements between small island developing States and foreign fishing groups; take account of the concerns and characteristics of these States within the United Nations Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks; and encourage and facilitate the full participation of small island developing States in the Conference and in the implementation of the Conference outcomes.

(iii) Assist with the establishment and/or strengthening, where necessary, of new institutional and administrative arrangements for the development of integrated coastal zone management plans and their implementation.

(iv) Support small island developing States in establishing national and regional capabilities for effective surveillance and monitoring of activities within their exclusive economic zones, in the setting up of regional and other joint-venture fishing enterprises, in developing inventories of marine resources and regional approaches to the sustainable management of their exclusive economic zones and in the strengthening of regional marine research centres.

(v) [Use the relevant results of the World Coast Conference of November 1993 to assist small island developing States with the development of integrated coastal zone management plans and to improve international coordination in that field.]

[Use the results of the November 1993 World Coast Conference held in Noordwijk, the June 1994 Meeting of Experts on the Control of Pollution from Land-Based Sources to be held in Montreal as well as the November 1995 intergovernmental conference on the protection of the environment from land-based activities to be held in Washington, D.C., in order to assist small island developing States in developing and implementing integrated coastal zone management (ICZM) plans, improving coordination in the field and developing strategies to prevent further marine and coastal degradation. More specifically, means of building capacity for ICZM planning and implementation should include, inter alia, the strengthening of regional and international networks, including South-South relationships; increasing public awareness and participation; enhancing relevant education and increasing training activities; ensuring the involvement and participation of non-governmental organizations and other major groups; supporting the development of concepts, methodologies and tools; and supporting and strengthening international research and improvements in monitoring, the results of which should be integrated into policy development, planning and decision-making.]

V. FRESHWATER RESOURCES

Basis for action

26. Freshwater resources are vital for meeting basic needs and inadequate protection of the quality and supply of freshwater resources can set important limits to sustainable development. Many health hazards in developing countries are related to poor water quality and limited water quantity. Because of their small size and particular geological, topographical and climatic conditions, many small island developing States face severe constraints in terms of both the quality and quantity of freshwater. This is particularly the case for low-lying coral-based islands where groundwater supplies are limited and they are protected only by a thin permeable soil. Even where rainfall is abundant, access to clean water has been restricted by lack of adequate storage facilities and effective delivery systems.

[27. Inadequate action to safeguard watershed areas and groundwater resources poses a further long-term threat, while in urban areas rapid population growth, changes in economic strategies and a growing per capita use of freshwater are significant challenges. Certain industries, including tourism and canning operations, are profligate users of water. A common threat to the freshwater resources of small island developing States is the contamination of supply by human and livestock waste, industry-related pollution and, in some cases, pesticides and other agricultural chemicals. With climatic change comes an increased risk of salt-water intrusion into the groundwater table. Such

incursion is made even more likely through low groundwater recharge in times of extended drought.]

A. National action, policies and measures

(i) Develop, maintain and protect watershed areas, irrigation systems, distribution networks and appropriate catchment systems and promote effective programmes for water conservation and prevention of water contamination through, inter alia, the development of integrated national water plans, the use of appropriate incentives and regulatory measures, community involvement in management and conservation, forest management and reforestation and investment strategies.

(ii) Develop and strengthen low-cost monitoring and assessment capabilities, linked to water resource databases, for relevant decision-making tools including forecasting models for water management, planning and utilization.

(iii) Strengthen procedures to monitor and respond to the impacts of natural and environmental hazards, in particular the impacts of climate change and climate variability, including drought and sea-level rise, on water resources.

(iv) Encourage the development and acquisition of appropriate technology and training for cost-effective sewage disposal, desalination and rainwater collection to provide sufficiently high quality potable freshwater, including opportunities for technology interchange between small island developing States.

(v) Strengthen national capacities to make decisions between competing demands over the allocation of limited water resources.

B. Regional action

(i) Develop and strengthen initiatives for regional cooperation in training and research to assist Governments in the development and implementation of integrated water resource plans, including conservation and rehabilitation of watersheds, protection of groundwater, fostering public awareness and water quality monitoring.

(ii) Provide technical assistance for the assessment and/or development and transfer of appropriate technology for water collection, distribution and protection, in particular, sewage disposal technology.

C. International action

(i) Improve access to environmentally sound and energy efficient technologies for the catchment, production, conservation and delivery of freshwater, including rainwater catchment, water treatment systems

and desalination, and foster the exchange of information on water treatment methods.

(ii) Enhance small island developing States' capacity to develop and implement integrated water resource plans, including water resource allocation and management, conservation and rehabilitation of watersheds, protection of groundwater, fostering public awareness and water quality monitoring.

(iii) Assist training and public awareness campaigns to build up an endogenous capacity relating to water management and conservation and appropriate rainwater catchment systems.

(iv) Support the establishment of methodologies aimed at assessing the adverse impact of climate change on freshwater resources and develop appropriate response and mitigation measures.

VI. LAND RESOURCES

Basis for action

28. The small size of most small island developing States, coupled with land tenure systems, soil types, relief and climatic variation, limit the area available for urban settlement, agriculture, mining, commercial forestry, tourism, and other infrastructure, and create intense competition between land use options. Most aspects of environmental management in small island developing States are directly dependent on, or influenced by, the planning and utilization of land resources. This is intimately linked to coastal zone management and protection in small island developing States.

29. For human requirements to be met in a sustainable manner, competing demands for the use of land resources must be resolved, and more effective and efficient ways of using these natural resources developed and adopted. As populations grow in small island developing States, there is a need for resolution of competing demands, particularly where land is limited and where commercial development of comparatively large tracts of land can result in shifts in small scale and subsistence agriculture to marginal lands.

30. The major long-term land management issue in small island developing States is degradation of the limited land area due to a variety of factors, including overuse because of high population pressure on a limited resource base; deforestation due to unsustainable commercial logging or permanent conversion to agricultural or grazing pursuits; and other episodic events, such as fire. Natural events such as catastrophic cyclones are also major contributors. Land degradation of this kind results in accelerated erosion and resultant decline in fertility and productivity, deterioration in water quality and siltation of rivers, lagoons and reefs. Deforestation is also linked to a decline in the continuity and quality of village water supply, depletion of genetic, wood and

non-wood plant resources, and the fading away of traditional forest, lagoon and reef-based subsistence life systems.

31. The search for an improved quality of life, with its increased demands for cash income, has led to greater production of export cash crops, increasing areas of cultivation and more mechanized production systems. In the past, unsustainable agricultural practices in these areas have contributed to deforestation and loss of multiple purpose trees from the rural landscape and agrochemical pollution of soils, freshwater and coastal resources. There is, however, much that can be learned from traditional systems of food production and use of plants to promote sustainable agriculture and land management.

A. National action, policies and measures

(i) Develop and improve national databases and the dissemination of information to relevant groups, especially local communities and women, for land-use planning and management, including estimates of carrying capacity, economic and environmental value of land resources, along with appropriate decision-making tools, such as land/geographic information systems.

(ii) Prepare and/or review land-use plans in conjunction with agricultural, forestry, mining, tourism, traditional land-use practices and other land-use policies, with a view to formulating comprehensive land-use plans and zoning so as to protect land resources, ensure sustainable and productive land-use and guard against land degradation, pollution and exceeding island carrying capacity.

(iii) Encourage appropriate forms of land tenure, improved land administration and a greater appreciation of the integrated nature of land development in order to facilitate sustainable land-use.

(iv) Formulate and enforce laws, regulations and economic pricing and incentives to encourage the sustainable and integrated use, management and conservation of land and its natural resources.

(v) Support appropriate afforestation and reforestation programmes, with appropriate emphasis on natural regeneration and participation of land owners, to ensure watershed and coastal protection and reduce land degradation.

(vi) Improve the availability, affordability and environmental quality of shelter in human settlements, in accordance with chapter 7 of Agenda 21.

(vii) Increase attention to national physical planning in both urban and rural environments, with a focus on training to strengthen physical planning offices, including the use of environmental impact assessments and other decision-making tools.

B. Regional action

(i) Provide appropriate training and other capacity-building opportunities for small island developing States, including systems for continuous surveillance of the rate and extent of land-use changes and monitoring of adverse environmental effects, to facilitate the implementation of national actions.

(ii) Collect, synthesize and share relevant information, knowledge and experience among small island developing States on sustainable land-use practices and policies in a structured and systematic way, including issues pertaining to environmental, agricultural, forestry, mining and other land-based sectors, market intelligence information, and assessment of potential interested overseas investors.

C. International action

(i) Support the improved availability of shelter and the economic and environmental quality of human settlements for small island developing States in accordance with chapter 7 of Agenda 21.

(ii) Facilitate the development and improvement of national databases and the dissemination of information to relevant groups, especially local communities and women, for land-use planning and management including estimates of carrying capacity, economic and environmental value of land resources, along with appropriate decision-making tools such as land/geographic information systems.

(iii) Facilitate more effective international and interregional cooperation, coordination and collaboration in the fields of agriculture, forestry and other land-use, through international and interregional networks and training programmes.

VII. ENERGY RESOURCES

Basis for action

32. Small island developing States are currently heavily dependent on imported petroleum products, largely for transport and electricity generation, energy often accounting for more than 12 per cent of imports. They are also heavily dependent on indigenous biomass fuels for cooking and crop drying.

33. The small island developing States will continue to be heavily dependent on petroleum fuels and biomass both in the short and medium term. However, the current uses of these fuels tend to be highly inefficient. Increased efficiency through appropriate technology and national energy policies and management measures will reap both financial and environmental benefits for small island developing States.

34. Renewable energy resources endowments of small island developing States vary greatly. All have substantial solar resources, which have still not been developed to their full potential. Wind potential is highly variable with location, both within and between countries. Hydroelectric power is a possibility only for some islands. Biomass endowment is common but unequal. Studies of the potential for geothermal, ocean thermal energy conversion and wave energy are continuing.

35. Several constraints to large-scale commercial use of renewable energy resources remain. These include technology development, investment costs, available indigenous skills and management capabilities. Small-scale application for rural electrification has been sporadic. The use of renewable energy resources as substantial commercial fuels by small island developing States is dependent on the development and commercial production of appropriate technologies.

A. National action, policies and measures

(i) Implement appropriate public education and awareness programmes, including consumer incentives to promote energy conservation.

(ii) Promote the efficient use of energy and the development of environmentally sound sources of and energy efficient technologies, paying special attention to appropriate incentive structures [and appropriate economic instruments] and the increasing economic possibilities of renewable sources of energy.

(iii) Establish and/or strengthen, where appropriate, research capabilities in the development and promotion of new and renewable sources of energy, including wind, solar, geothermal, hydroelectric, ocean thermal energy conversion, wave and biomass.

(iv) Strengthen research capabilities and develop technologies to encourage the efficient utilization of non-renewable sources of energy.

B. Regional action

(i) Establish or strengthen research and policy capabilities in the development of new and renewable sources of energy, including wind, solar, geothermal, hydroelectric, wave and biomass.

(ii) Assist, where appropriate, in the formulation of energy policies, standards and guidelines for the energy sector applicable to small island developing States, and enhance national capacity to effectively plan, manage and monitor their energy sectors.

(iii) Gather and disseminate information, and promote regional cooperation and technical exchanges between small island developing States on energy-sector issues, including new and renewable sources of energy.

C. International action

(i) Support the research, development and utilization of renewable sources of energy and related technologies and improve the efficiency of existing technologies and end-use equipment based on conventional energy sources.

(ii) Formulate and ratify international agreements on energy-sector issues in relation to sustainable development in such areas as carbon emissions and the transportation of petroleum, for example, the use of double-hulled tankers.

(iii) [Develop and agree to effective mechanisms for the transfer of energy technology, and establish databases to disseminate information on experience in the use of new and renewable sources of energy as well as on the efficient use of non-renewable energy sources.]

(iv) [[Encourage] [ensure that] international institutions and agencies, including public international financial institutions, [to] incorporate environmental efficiency and conservation principles into energy-sector-related training and technical assistance and [where appropriate to] provide concessionary financing facilities for energy-sector reforms.]

VIII. TOURISM RESOURCES

Basis for action

36. Tourism has contributed much to the development of small island developing States and, as one of only a few development options for small island developing States, will continue to be very important for their future growth. It could also stimulate the development of other sectors. However, if not properly planned and managed, it could significantly degrade the environment on which it is so dependent. The fragility and interdependence of coastal zones and the unspoilt areas on which eco-tourism depends calls for careful management. The special tourist attraction of small island developing States is the distinctiveness of their cultures. The diversity and fragility of their environments are reflected in the diversity and fragility of their cultures. The protection of the former is an important condition for the protection of the latter.

37. Capital investment in tourism, particularly for the necessary infrastructure, is costly. There is usually also great competition for land resources between tourism, agriculture and other land uses. Large increases in tourism and overdevelopment of tourism in particular areas or in whole islands could be environmentally and culturally disruptive and detrimental to other valuable sectors, such as agriculture. It is imperative, therefore, that the development of tourism be carefully planned, particularly in relation to compatible land uses, water management, coastal zone management and the

development of parks. Tourism, like all forms of development in the coastal zone, needs to be carefully integrated within the existing cultural and environmental constraints and opportunities present within small island developing States. Eco-tourism, linking areas of high ecological value to low-impact tourism, may present important and environmentally sustainable opportunities for tourism development in small island developing States.

A. National action, policies and measures

(i) Ensure that tourism development and environmental management are mutually supportive.

(ii) Adopt integrated planning and policies to ensure sustainable tourism development, with particular attention to land-use planning and coastal zone management, requiring environmental impact assessments for all tourism projects; continuous monitoring of the environmental impact of all tourism activities; and the development of guidelines and standards for design and construction taking into account energy consumption, the disposal of wastes and land degradation, the proper management and protection of eco-tourism attractions, and the carrying capacity of areas for tourism.

(iii) Identify and develop facilities to meet specific niche markets, particularly in eco-tourism, nature and cultural tourism, and involve local populations in the management of natural protected areas set aside for eco-tourism.

(iv) Adopt measures to protect the cultural integrity of small island developing States.

B. Regional action

(i) Ensure that tourism and the environment are mutually supportive in cooperation schemes at the regional level including, where appropriate, harmonization of standards and regulations.

(ii) Encourage the assessment and development of potential complementarities among small island developing States including the development of packaged options covering several islands and encouraging joint marketing and training programmes.

(iii) Establish or strengthen regional mechanisms for the exchange of information in the development of a safe and sustainable tourism sector, using, as appropriate, the capacities of regional tourism organizations.

C. International action

(i) Promote recognition of the value of tourism in small island developing States to the international community as well as the fragility of the resources on which tourism in small island developing States depends and of the need therefore for international support to encourage its sustainable development.

(ii) Facilitate efforts at the national and regional levels to assess the overall impact of the economic, social and ecological aspects of tourism, to plan sustainable tourism and to develop eco- and cultural tourism.

IX. BIODIVERSITY RESOURCES

Basis for action

38. Small island developing States are renowned for their species diversity and endemism. However, due to the small size, isolation and fragility of island ecosystems, their biological diversity is among the most threatened in the world. Deforestation, coral reef deterioration and the introduction of certain non-indigenous species are the most significant causes of loss of biodiversity in small island developing States.

39. In the past, there has been a strong emphasis on the collection of more information. In small island developing States where limited and biologically precious resources are being threatened, while lack of sufficient information is often cited as a rationale for inaction, there is often enough information to identify areas requiring *in situ* conservation. Although more information will be important to develop appropriate management plans, information collection should no longer be a prior condition for *in situ* conservation projects.

40. The nature of traditional, often communal land and marine resource ownership in many island countries requires community support for the conservation effort. Without this local support and commitment and the opportunity to integrate sustainable income generation into the conservation effort, even the most highly studied and well planned conservation area will not be sustainable.

41. Some of the most precious biological resources for islanders, environmentally, economically and culturally, are marine and coastal rather than terrestrial. This requires a conservation focus that takes into account customary land and reef tenure systems and practices, which may differ from that usual in the larger developed countries. Other considerations include the adequacy of basic institutional support for conservation efforts (staff, vehicles etc.) and access to financial resources to help start innovative projects.

42. A number of international and regional conventions exist concerning the conservation and sustainable utilization of biological resources and these are expected to provide a sound legal framework of potential benefit to the sustainable development of small island developing States.

A. National action, policies and measures

(i) Formulate and implement integrated strategies for the conservation and sustainable use of terrestrial and marine biodiversity, in particular, endemic species, including protection from the introduction of certain non-indigenous species and identification of sites of high biological significance for the conservation of biological diversity and/or for eco-tourism and other sustainable development opportunities, such as sustainable agriculture, training and research.

(ii) Ratify and implement the Convention on Biological Diversity, 6/ the Convention on International Trade in Endangered Species of Wild Fauna and Flora and other relevant international and regional conventions.

(iii) Promote community support for the conservation of biological diversity and the designation of protected areas through concentration on educational strategies that increase awareness of the significance of biodiversity conservation and particularly the fundamental importance of a diverse biological resource base to resource-owning communities.

(iv) Generate and maintain buffer stocks or gene banks of biogenetic resources for reintroduction into the environment, especially in the case of post-disaster restoration and rehabilitation.

(v) Develop or continue studies and research on biological resources, their management and their intrinsic socio-economic and cultural value, including biotechnology.

(vi) Conduct detailed inventories of existing flora, fauna and ecosystems to provide basic data needed for the preservation of biodiversity.

(vii) Ensure that the [ownership of] intellectual property rights [and the rights] [of resource owners] are protected.

B. Regional action

(i) Encourage countries to give priority to known, existing sites of biological significance and to build up community support for the protection of these areas, including protection from the introduction of non-indigenous species.

(ii) Promote regional studies of the socio-economic and cultural value of biological resources, including genetic engineering, intellectual property rights, and access to biotechnology, with the participation

of existing or strengthened scientific institutions, relevant international agencies and non-governmental organizations.

(iii) Promote the establishment of regional gene-bank centres for research, seeking the development and introduction of more resistant and productive varieties of species, and provide the appropriate legal and technical procedures for the use of these biological resources.

(iv) Coordinate information exchange, training and technical assistance in support of national efforts to establish and manage conservation areas and for species conservation, including the identification and use of traditional knowledge and techniques for resource management which assist the conservation of biological resources and diversity.

(v) Promote and/or strengthen already existing regional scientific institutions which can operate as reference centres for problems related to the conservation and sustainable management of biodiversity.

(vi) Strengthen the capacity of regional organizations to provide technical support and coordination in the development of inventories of flora, fauna and ecosystems and where feasible to establish regional databases and gene banks.

(vii) Support the development of adequate and effective legal mechanisms for the protection of intellectual property rights.

C. International action

(i) Provide improved access to financial and technical resources for the conservation of biological diversity, including funds for basic institutional and logistic support for the conservation and management of biological diversity, with priority to be accorded to terrestrial as well as coastal and marine biodiversity, such as coral reef ecosystems.

(ii) Improve access to environmentally sound biotechnology, including know-how and delivery mechanisms.

(iii) Ensure that the activities of relevant international organizations, agencies and programmes of the United Nations as well as relevant non-governmental organizations, are closely coordinated with and supportive of identified regional small island developing States centres or ongoing programmes in the conservation and sustainable use of biodiversity and biotechnology.

(iv) Make greater use of import restrictions under the Convention on International Trade in Endangered Species of Wild Fauna and Flora on products from endangered species of small island developing States.

(v) Support national and regional actions for developing inventories of flora, fauna and ecosystems, including training and technical assistance.

(vi) Support strategies to protect small island developing States from the introduction of non-indigenous species.

X. NATIONAL INSTITUTIONS AND ADMINISTRATIVE CAPACITY

Basis for action

43. To address the environmental resource management priorities essential to the sustainable development of small island developing States, national institutional and administrative arrangements are increasingly embracing the interrelated nature of activities in their limited land area. The integration of environmental considerations into the national decision-making processes is considered to be the single most important step to be taken by small island developing States to ensure that these problems are addressed and that the principles of sustainability guide all future development.

44. Economic imperatives must be evaluated from the perspective of socio-environmental considerations if the natural resource base is to be preserved for the benefit of present and future generations and social and cultural values safeguarded. Economic development must become sustainable development by incorporating environmental and resource management. This requires the adoption of interdisciplinary approaches to both planning and decision-making, and to the extent possible, encouragement of public participation in the process.

45. Formal integration of economic and environmental considerations will necessitate a series of institutional adjustments within government administrations, accompanied by across-the-board strengthening of environmental administrative capacity. This must happen at all levels of government, including at the local level. Many forms of institutional adjustment are conceivable and would be tailored to specific country needs. It is recognized that this process would benefit from public participation.

46. Many countries have prepared environmental strategies and plans which integrate environment and development and these are seen as the first step in a process leading to the wide application of sustainable development principles. For these plans to promote sustainable development, however, they must be utilized for national decision-making, including at all appropriate levels of government, in order that environment and development policy can be carefully integrated.

A. National action, policies and measures

(i) Strengthen institutional arrangements and administrative capacity, including cross-sectoral/inter-ministerial committees and task forces, to integrate environment and economic policy in national planning and across sectors and ensure capacity to implement Agenda 21 and the decisions of the Global Conference.

(ii) Develop implementation strategies and schedules, including financing, for both regional and national activities.

(iii) Establish or strengthen environmental agencies with adequate financial and staff resources.

(iv) Increase the awareness and involvement of non-governmental organizations, local communities and other major groups in public education, national planning and implementation of sustainable development programmes.

(v) Improve public education to familiarize local, provincial/State and national bodies with environmental laws already in existence, to facilitate discussion of the value of environmental legislation and standards to local communities and to open wider discussion on more culturally appropriate penalties for contravention of laws and regulations.

(vi) Develop appropriate national, provincial/State and local environmental regulations which reflect the needs and incorporate the principles of sustainability, create appropriate environmental standards and procedures, and ensure their integration into national planning instruments and development projects at an early stage in the design process, including specific legislation for appropriate environmental impact assessment for both public and private sector development.

(vii) Give sustainable development task forces or their equivalent official authority and validity to permit their continued meeting as interdisciplinary and communally representative advisory bodies.

(viii) Provide adequate resources for the enforcement of environmental regulations.

(ix) Enact domestic legislation required for the implementation of the wide range of international environmental conventions and agreements directly relevant to small island developing States.

(x) Establish national information nodes on the sustainable development of small island developing States, to encourage, at the international level, the development of a small islands' sustainable development information network to facilitate the exchange of experience among small island developing States.

B. Regional action

(i) Assist, where appropriate, with the preparation and implementation of national environmental strategies and plans.

(ii) Provide appropriate research, training and information dissemination to facilitate the mainstreaming of environment in development planning and decision-making and coordination between sectors.

C. International action

(i) Improve access to financial and technical assistance to strengthen national institutions and administrative and operational capacity.

(ii) Support the development of a small islands' sustainable development information network to facilitate the exchange of experience among small island developing States.

(iii) Assist in providing training and capacity-building services to facilitate ratification and implementation of appropriate international instruments.

XI. REGIONAL INSTITUTIONS AND TECHNICAL COOPERATION

Basis for action

47. The limited human resources and small size of small island developing States makes it especially important to pool these resources through regional cooperation and institutions. It is essential that effective support for regional projects be coordinated through regional bodies. This is desirable to avoid duplication and achieve complementarity of assistance.

48. Regional organizations, both United Nations and non-United Nations, can play a key role to facilitate efficient and effective assistance to small island developing States. Regional organizations are also useful vehicles, in many instances, for implementation of regional programmes. Programming, administrative and implementation capacities of those bodies [can further be improved with] the support of member nations and other donors.

49. Currently, multilateral and bilateral donors undertake their own regional programming exercises through regular dialogue with small island developing States and relevant bodies. Non-governmental organizations also deliver services at the national and regional level in support of regional programmes.

A. National action, policies and measures

(i) Support regional organizations through membership and budgetary contributions.

(ii) Encourage improved coordination and collaboration among regional bodies and between the international community and regional programmes.

B. Regional action

(i) Improve coordination among regional bodies for the sustainable development of small island developing States as outlined in Agenda 21.

(ii) Formulate regional programmes and strategies jointly between regional bodies and national authorities consistent with Agenda 21.

(iii) Develop a small island developing States technical assistance programme to promote inter- and intraregional cooperation on sustainable development in small island developing States.

(iv) Establish, where appropriate, and support regional sustainable development centres to facilitate the sustainable development of small island developing States in the areas of research, training, the development of endogenous technology, transfer of technology and the provision of legal and technical advice, taking into account the work of existing relevant institutions, including universities.

(v) Draft model environmental provisions as a guide for countries, leaving to each small island developing State the incorporation of country-specific provisions to reflect the variety and diversity of national and customary laws and procedures and encourage, where appropriate, the harmonization of environmental legislation and policies within and between small island developing States with a view to ensuring a high degree of environmental protection.

(vi) Prepare environmental law training manuals for both lawyers and others working in the environmental field.

(vii) Conduct regional and in-country workshops on environmental law subjects, including environmental conventions and treaties, environmental impact assessment, heritage, pollution, civil enforcement, prosecution and environmental mediation.

(viii) Assess and inform small island developing States about the content, notification processes, financial and legal implications of relevant international environmental instruments and conventions in order to encourage small island developing States to accede to and implement them.

C. International action

(i) Support environmental law offices within regional and subregional organizations to implement regional approaches, including the development of relevant expertise.

(ii) Improve access to financial and technical resources for the development and/or strengthening of regional bodies in order to respond to the sustainable development needs of small island developing States.

(iii) Improve coordination with relevant regional/subregional bodies to implement Agenda 21 and the decisions of the Global Conference.

(iv) Strengthen regional bodies in order to improve their capacity to respond to the sustainable development needs of small island developing States.

XII. TRANSPORT AND COMMUNICATION

Basis for action

50. Transport and communications are the lifelines linking small island developing States with the outside world, with each other and within their own countries, and are an important means of achieving sustainable development. Distance and isolation have resulted in relatively high transport costs, including high transport insurance costs, for many small island developing States. The quality and frequency of international shipping and air services are largely beyond the control of island States. Domestic markets are too small to provide economies of scale and the remoteness of many rural and outer-island communities constrains options and increases costs. While national airlines are necessary to serve the local market, especially in archipelagic States, they tend to fragment the regional market. The constraining influence of these factors on the sustainable development of island countries cannot be underestimated.

51. The environmental uses associated with transport and communications development, including quarantine, also need to be properly addressed. Such issues include land transport, which has been found to be one of the greatest degraders of the urban environment, both at national and regional levels, and which appears to have lagged behind improvements and major changes in transport services.

52. A major challenge is to devise innovative approaches to resolving transport and communications problems, for example, the development of low-cost high-tech methods for the moving of cargo, and to improving community access to telephone, radio and related services. A further challenge is to improve the management and maintenance of existing transport and communications infrastructure. In building new infrastructure, particular consideration needs to be given to maintenance and recurrent cost issues.

A. National action, policies and measures

(i) Continue efforts to strengthen transport services and facilities at both the national and local levels, with particular attention to environmental protection, safety and to innovative low-cost transport solutions.

(ii) Upgrade domestic communication facilities, including radio and telephone coverage to remote rural and outer island communities, and continue efforts to improve international telecommunications links.

(iii) Address quarantine problems and requirements stemming from changing transport situations and longer-term climatic changes.

B. Regional action

(i) Foster increased cooperation in civil aviation, shipping and telecommunications, including possibilities for consolidation of national airline services.

(ii) Develop effective quarantine services, including through upgrading existing plant protection and related programmes.

(iii) Encourage the application of appropriate communications technologies to promote sustainable development in areas such as education, health, eco-tourism and other areas critical to sustainable development, including the promotion of greater public awareness.

C. International action

(i) Develop innovative energy-efficient transport solutions to move people and cargo to and from island ports without the need to establish high-cost infrastructure.

(ii) Cooperate with national and regional bodies in designing and enforcing effective quarantine systems.

(iii) Improve access to financial and technical resources in support of regional organizations which are coordinating and advising small island developing States in the fields of transport and communications.

(iv) Promote research and development in telecommunications and transportation relevant to the sustainable development of small island developing States.

(v) [Promote arrangements and measures to lower the international telecommunications costs to small island developing States.]

XIII. SCIENCE AND TECHNOLOGY

Basis for action

53. Science and technology are crucial for the achievement of sustainable development. There would be considerable benefit if all countries incorporated environmentally friendly technologies to a greater extent. However, in small island developing States science and technological capacity remains underdeveloped both in terms of research and development institutions and of the

availability of scientists to serve such institutions on a sustained basis. At the same time, some island peoples survive on traditional knowledge and its application. These are being threatened in small island developing States increasingly driven to adopt technologies and scientific understanding. A better integration of contemporary and traditional knowledge could also prove beneficial.

54. Many new environmentally sound technologies relevant to economic activities in small island developing States are becoming available. Information concerning these and the ability to assess them are crucial for technological change to achieve sustainable development. Science and technological capacity require trained people to serve in production enterprises, to engage in training and to help in the assessment and adaptation of imported technologies.

55. Small island developing States will benefit from increased access to imported technologies to facilitate their sustainable development. However, improved capacity to tap local knowledge and to develop environmentally sound endogenous technologies is also important in a number of areas including agriculture, agricultural processing, construction, communications and marine sciences, as an important step towards sustainable development.

56. Trained people are needed in a wider range of fields to ensure adequate training and capacity for environmental impact and technology assessment. Limited national capacities mean that in a number of these areas, emphasis would have to be given to regional and subregional approaches and joint ventures with the international community. Encouragement of private sector involvement could also be very important because of limited governmental capacity to undertake both training and research and development.

A. National action, policies and measures

(i) Ensure that science and technology policy is closely linked to national environmental strategies and sustainable development plans and is responsive to local and sectoral sustainable development needs, emphasizing self-sufficiency and the minimization of import dependency.

(ii) Give greater emphasis to research and development, as well as to training for science and technology and economic development generally, and for environmental and technology assessment in particular; refine analytical tools for natural resource accounting; and encourage the development and use of information and communications technology to overcome size and isolation problems.

(iii) Promote research and development in areas where endogenous technologies and traditional practices have great relevance, including agriculture, agricultural processing, waste-recycling, ethnobiology and biotechnology, construction and renewable energy, ensuring that mechanisms are in place for the appropriate protection of intellectual property rights in accordance with relevant international conventions.

(iv) Encourage the use of endogenous environmentally friendly technologies through regulations, standards and economic incentives.

(v) Develop or ensure access to databases on environmentally sound technologies of local relevance and collect consistent time-series data for monitoring the performance of sustainable development.

(vi) Promote and strengthen the role of women in science and technology disciplines.

B. Regional action

(i) Develop or strengthen efforts to assist small island developing States assess technology, develop databases on environmentally sound technologies, conduct relevant research and development and training, develop appropriate information systems to share experience within and between small island developing States, through relevant regional organizations and institutions.

(ii) Encourage appropriate regional standards and the standardization of analytical methods as well as scientific inter-calibration exercises in order to facilitate the exchange of data.

(iii) Develop and strengthen regional ocean sciences networks with particular reference to data collection and dissemination of information relevant to small island developing States.

C. International action

(i) Facilitate access to and the development of environmentally sound technologies relevant to small island developing States, including coastal zone management and marine and ocean sciences, using, inter alia, joint ventures, joint research and development programmes and financial mechanisms.

(ii) Strengthen coordination and networking of the various national centres, regional organizations and institutions and international organizations working in areas of science and technology to facilitate information flows, database creation and access, and greater collaboration and technical cooperation in programmes.

(iii) Encourage development within the international community, including the United Nations system, of appropriate programmes in support of regional and national efforts to build the science and technology capacities of small island developing States, including those that increase the output and range of their limited human resources, taking into account relevant activities of the Commission on Sustainable Development and the Commission on Science and Technology for Development.

(iv) Take account of the needs of small island developing States in the action plan for training in integrated coastal zone management being developed cooperatively by the United Nations Development Programme (UNDP) and the Division for Ocean Affairs and the Law of the Sea of the United Nations Secretariat.

(v) Facilitate the full involvement of scientists and other experts from small island developing States in marine scientific research.

(vi) Promote the free flow of, and access to, data and information resulting from marine scientific research, particularly as it relates to monitoring in small island developing States.

(vii) Accelerate development of the coastal module of the Global Ocean Observing System due to its particular importance to small island developing States.

XIV. HUMAN RESOURCE DEVELOPMENT

Basis for action

57. Human beings are at the centre of concerns for sustainable development and thus significant attention must be given to projects which will enhance the quality of human life in small island developing States. Projects should be undertaken not only with a view to the contribution that individuals, groups, communities and nations can make towards sustainable development, but more importantly, how these projects will ultimately affect the well-being of those living in small island developing States.

58. The smallness and vulnerability of small island developing States necessitates special attention to population issues, education and training, and health for effective human resource development. Poor health services and nutrition and housing, low levels of female participation in development, [inadequate family planning services] [current insufficiency of education, information and means, as appropriate, for the responsible planning of family size] and poor social services demonstrate the need for attention to human resource development issues. High population densities and growth, as well as depopulation in some areas, are constraints to achieving sustainable development in many small island developing States. Increasing attention must be given to the concept of island carrying capacity and environmental health, especially for fragile and highly populated environments in urban areas, coastal zones and hillsides.

59. The strengthening of national educational and training mechanisms is a matter of high priority. This is essential to facilitate the flow of information on sustainable development issues, enhance public awareness of the environment and to encourage participation in the implementation of effective solutions. A key requirement is to promote access to and improve the quality of basic education.

60. Environmental education and science training, particularly on issues specific to small island developing States, are essential to developing environmental awareness. Training in environmental management and sustainable development are needed at all levels of the education system. For professional training, multidisciplinary approaches are needed. There is a demand for knowledge on the environment to meet both educational and professional needs. Areas in which more training is greatly needed are science and technology generally, technology assessment, environmental impact assessment, environmental management and sustainable development, environmental chemistry, environmental engineering, physical planning and the development of geographic information systems, and information and communications technology.

61. Chapter 6 of Agenda 21 recognizes the close dependency of human health on a healthy environment and provides a list of priority actions. Although some small island developing States have implemented relevant activities, the overall improvement in the health of their populations continues to decelerate. Furthermore, the health conditions of vulnerable groups, such as poor women and children, have actually deteriorated in many cases.

A. National action, policies and measures

(i) Infuse sustainable development ideas into education curricula at all levels and promote participation by all groups, emphasizing the link between environment and social and economic issues, and continue to improve access to scientific, mathematics and technical training.

(ii) Incorporate population issues into the mainstream of decision-making and planning mechanisms of government, including the development of comprehensive population policies consistent with sustainable development objectives while respecting and promoting the dignity and the fundamental rights of the human person and of the family.

(iii) Improve urban/rural settlements by giving priority to the improvement of basic services such as potable water, sewage disposal, shelter, education, family planning and health as well as the elimination of poverty; ensuring that development projects have explicit environment and health objectives; ensuring adequate resources for public health and health prevention activities; and considering urban development options including decentralization.

(iv) Direct efforts to improve urban/rural settlements through the promotion of projects aimed at the elimination of poverty which give priority to the improvement of basic services such as shelter, comprehensive public health including, inter alia, potable water, sewage disposal, maternal and child health care, the responsible planning of family size and other specific measures aimed at health promotion and disease prevention.

(v) Encourage the use of distance training to meet expanding educational demand and the large demand for knowledge and training on the environment.

(vi) Promote and strengthen the role of major groups, including non-governmental organizations and, in particular, women, in the creation and implementation of sustainable development initiatives.

(vii) Seek to improve the quality of education, training and human resource development by upgrading basic education and technical/vocational skills training and by making improvements where necessary to national management and planning capacities and labour market linkages.

(viii) Encourage the use of traditional knowledge and skills in environment, resource management and health, and the use of community groups to assist in promoting environmental awareness.

B. Regional action

(i) Support national efforts to develop appropriate curricula for sustainable development at all levels, including the introduction, development and/or access to interdisciplinary training in environmental sciences at a tertiary level, and improve coordination of training activities on sustainable development and environmental issues that are being conducted throughout small island developing States by different organizations, including non-governmental organizations.

(ii) Assess the impacts of urbanization on the physical and human environments and provide health evaluation and impact assessment capability for small island developing States.

(iii) Enhance regional cooperation in educational and human resource development and improve the responsiveness of education centres to regional requirements.

C. International action

(i) Support efforts to develop curricula for sustainable development, in particular tertiary level courses on environmental management and sustainable development, encouraging multidisciplinary approaches.

(ii) Provide appropriate resources to meet the particular population concerns of small island developing States, including implementation of any relevant outcomes of the International Conference on Population and Development.

(iii) Improve coordination and targeting of education and human resource development programmes provided by the development partners of small island developing States.

(iv) Support national and regional efforts to improve education and human resource development in small island developing States.

(v) Encourage and support technical cooperation among small island developing States and other developing countries as a means of enhancing sustainable development.

(vi) Support efforts to promote and strengthen the role of small island developing States in the creation and implementation of sustainable development initiatives.

(vii) Support basic regional and national formal and informal health training institutions and research on technology and health problems of small island developing States, paying more attention to malaria, nutrition, drugs, acquired immune deficiency syndrome (AIDS) and maternal and infant health care, and support national and regional efforts to improve urban/rural settlements.

(viii) Support environmental education programmes specific to island environments and adapted to all levels, including primary and secondary schools, with curricula and materials tailored to the interests and needs of end users.

(ix) Continue to support and increase where possible scientific, and technical training in order to promote sustainable development.

(x) Support programmes aimed at increasing the involvement of community-based organizations in conservation and natural resource management programmes, including planning and decision-making.

(xi) Provide assistance for the training of policy makers in the area of natural resources management, including policy related courses for resolution of competing demands, multiple use of resources and other policy related environmental issues.

(xii) Support small island developing States in their efforts to improve urban/rural settlements through the promotion of projects aimed at human development and the elimination of poverty, particularly urban development options including decentralization, and by ensuring that such projects have adequate resources.

XV. IMPLEMENTATION, MONITORING AND REVIEW

62. Effective implementation, monitoring and review of this programme of action is essential for the sustainable development of small island developing States. [The programme of action is an opportunity for the international community to demonstrate its commitment to the means of implementation agreed upon under Agenda 21.] Since small island developing States are among the most environmentally vulnerable, the United Nations system and the international community, in line with Principle 6 of the Rio Declaration and on the basis of chapter 17G of Agenda 21, shall give special priority to the situations and the needs of small island developing States in the implementation of this programme of action. That will require, in particular, adequate resources for implementation and actions at the national, regional and international levels.

63. The implementation of the programme of action shall be consistent with a number of parallel international processes important to the sustainable development of small island developing States, which contain relevant provisions. Those processes include the Commission on Sustainable Development; the Intergovernmental Negotiating Committee for a Framework Convention on Climate Change; the Convention on Biological Diversity; the United Nations Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks; the United Nations Convention on the Law of the Sea; 7/ the International Conference on Population and Development; the Intergovernmental Negotiations on Land-Based Sources of Marine Pollution of the United Nations Environment Programme; the Intergovernmental Negotiating Committee for the Elaboration of a Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, particularly in Africa (INCD); the World Coast Conference; the Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movements of Hazardous Wastes within Africa; the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal; the Convention for the Protection of the Natural Resources and Environment of the South Pacific Region, and other relevant international instruments for the control of transboundary movements of hazardous wastes and their disposal; the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES); the Convention on Wetlands of International Importance Especially as Waterfowl Habitat; the Fourth World Conference on Women; the World Summit for Social Development; and the World Conference on Natural Disaster Reduction. Support for the participation of small island developing States in those processes will be important and those processes will need to reflect the outcome of the Global Conference on the Sustainable Development of Small Island Developing States. As small island developing States develop their approaches for sustainable development, the international community should pursue actions that will improve the capacity of small islands to address a number of specific issues, making the most efficient use possible of opportunities in other international forums to ensure an integrated and comprehensive approach.

64. [Agenda 21 represents a comprehensive document, carefully negotiated and wherever referred to in the programme of action should be looked to as a whole.] As recognized in Agenda 21, Governments will be primarily responsible for the implementation of the programme of action. The sustainable development of small island developing States will require the development of national and regional strategies, plans, policies and processes. International cooperation will be essential to support and complement such efforts. The United Nations system has a key role to play in close cooperation and coordination with other international, regional and subregional organizations, which are called upon to contribute in large measure to that effort. For small island developing States, regional and subregional efforts have proved successful and will remain the principal instruments for collective action. Consistent with Agenda 21, it will also require the engagement and active participation of major groups, including women, children and youth, indigenous people and their communities, non-governmental organizations, local authorities, workers and their trade unions, business and industry, the scientific and technological community, and farmers.

A. National implementation

65. Small island developing States have begun to implement Agenda 21. In many cases, national strategies have been or are being developed as a basis for action. Further progress is required to ensure that environmental considerations are given appropriate significance, in particular at central levels of decision-making, and that there is full integration of environmental and developmental considerations at both micro- and macro-levels respecting domestic, environmental and cultural values. Considerable emphasis has been placed on building endogenous capacity throughout the programme of action, which will require considerable effort to implement.

66. Progress in the implementation of Agenda 21 and the decisions of the Global Conference on the Sustainable Development of Small Island Developing States will depend ultimately on the resources small island developing States can mobilize from internal and external sources to meet the great challenges of sustainable development in general and capacity-building in particular.

[67. New participatory approaches to policy-making and implementation of sustainable development programmes will be necessary at all levels. In that regard, there is a special role for groups that include women, youth, senior, indigenous and local communities as well as the private sector, labour and non-governmental organizations, as articulated in chapter 27 of Agenda 21.] [As stated in chapter 23.2 of Agenda 21, one of the fundamental prerequisites for the achievement of sustainable development is broad public participation in decision-making.]

68. Some of the important actions necessary at the national level are described below.

1. Finance

69. [[The implementation of the programme of action will require adequate resources to reflect the increased significance attached to sustainable development considerations in national development planning.] [Environment and development will also need to be integrated at the outset of decision-making processes, so as to align macroeconomic policies with environmental goals. Moves towards the reordering of priorities in the use of resources and increased use of economic instruments, for environmental protection and as an indirect mechanism for financing local capacity-building, should be explored, along with enhanced private sector investment and the use of innovative financing mechanisms for sustainable development.]]

2. Trade

70. [A more diversified [export] production structure [, using sustainable production methods,] is required which avoids overconcentration on a few commodities [and exploits existing or potential comparative advantages], in order to achieve greater and more stable export earnings and to promote import substitution.] Develop exports for which small island developing States have,

or could develop, a comparative advantage in world markets, using methods of production which are sustainable.

3. Technology

71. [[Take measures with the strong involvement of the private sector,] enhancing the capacity for the development of indigenous technology; the capacity to manage, assess, acquire and develop technologies and the utilization of appropriate and environmentally sound technologies [taking into account the need to protect intellectual property rights [of] [vested in] resource owners].]

4. Legislation

72. Develop new legislation and revise existing legislation where appropriate to support sustainable development, incorporating customary and traditional legal principles where appropriate, [backed up with training and adequate resources for enforcement].

5. Institutional development

73. [Appropriate national measures should be taken [to strengthen units in finance, planning and other ministries] to integrate environmental, population and sustainable development strategies in national and sectoral development planning.]

6. Information and participation

74. [Increase awareness and involvement of non-governmental organizations, women, [religious leaders], local communities, and other major groups in national planning, the development of environmentally sound and sustainable technologies and the implementation of sustainable development programmes. That should include the establishment or strengthening of networks for the dissemination of information to assist effective participation in the planning and implementation of sustainable development activities.]

7. Human resource development

75. Increase national capacity-building at all levels through public awareness and human resource development, including education, training and skill development, in particular, of technicians, scientists and decision makers, to better plan and implement sustainable development programmes.

B. Regional implementation

76. As has been highlighted within the programme of action, pooling the limited human resources of small island developing States through regional cooperation and institutions is a necessary part of their progress towards sustainable development. Regional action based on priorities, identified in the national strategies and plans of many small island developing States, requires better coordination of effort, stronger regional organizations and improved access to financial and technical resources [both public and private]. To assist in that effort, renewed emphasis should be given to more effective implementation of relevant international programmes, including coordination and interchange between regions and among islands within regions.

77. [To facilitate the coordination and implementation of the programme of action a mechanism should be [devised] [identified], where appropriate, within each region.] This would include:

(a) Relevant United Nations agencies, non-United Nations regional organizations and regional banks, and donors and recipients;

(b) Appropriate arrangements for the participation of non-governmental organizations.

78. Relevant non-United Nations regional organizations should be encouraged to take the programme of action into account in the fulfilment of their respective functions.

79. Each of the relevant regional commissions of the United Nations, including through the provision of the necessary [autonomy] and of adequate resources to their subregional offices, should be enabled to support regional activities to coordinate the implementation of the Conference outcomes at the regional level without prejudice to the ongoing process of decentralization. That would involve:

(a) [[Collaborating with appropriate regional institutions and organizations] [assisting the appropriate regional mechanism] and acting as a point of liaison between the non-United Nations regional organizations, the United Nations regional agencies and the Department for Policy Coordination and Sustainable Development of the United Nations Secretariat in New York, and between the United Nations agencies at the regional level.]

[80. Drawing on information provided by small island developing States and appropriate organizations, consolidated reports analysing activity in relation to regional implementation [of the programme of action] should be presented to [each session of] the Commission on Sustainable Development [during the period agreed for the implementation of the programme of action]. [Under an agenda item established for that purpose,] those reports would include:

(a) Activities of United Nations agencies at the regional level;

(b) Activities of other non-United Nations regional organizations;

(c) Multilateral, regional and bilateral activities;

(d) National level activities, including activities of non-governmental organizations, women and other major groups;

(e) Means by which coordination of United Nations regional activities has taken place at the inter-agency level, together with suggestions for improvement.]

81. In addition to ongoing programmes for the sustainable development of small island developing States, and recognizing the need to implement all activities within this action programme, a number of important programmes and measures are necessary at the regional level to support national priorities, as described below.

1. Finance

82. Develop to the extent possible coordinated approaches to the mobilization of financial resources for national and regional efforts to implement sustainable development, [including improved access to financial resources,] [and enhance transparency and efficiency of the use and management of these resources] [the encouragement of private investment and the identification of opportunities for introducing innovative financial mechanisms].

2. Technology

83. Encourage the cooperative development and sharing of appropriate technology through the regional organizations, centres/networks for the sustainable development of small island developing States.

3. Legislation

84. Support national efforts to develop comprehensive legislation in support of sustainable development, and to ratify and implement international conventions. Support legal training and training manuals in areas of environmental impact assessment, cultural heritage, pollution, civil enforcement, mediation and prosecution, and encourage, where appropriate, the harmonization of environmental legislation and policies within and between small island developing States in order to ensure high levels of environmental protection.

4. Institutional development

85. Support national efforts to implement effective institutional models, at all levels, for integrating environmental and population considerations within development and sectoral planning, including the development and implementation of appropriate approaches to integrated coastal zone management.

5. Human resource development

86. Promote and support national efforts at capacity-building through human resource development, particularly through increased training at all levels, in particular, of technicians, scientists and decision makers, to cope with all aspects of planning and implementing programmes for sustainable development.

C. International implementation

87. The programme of action is part of the process of the implementation of Agenda 21, in particular, chapter 17G.

1. Finance

88. The implementation of the programme of action will require the better use of existing resources as well as the [mobilization] [and provision] of financial resources [which are adequate, predictable, new and additional] in accordance with chapter 33 of Agenda 21 [as well as through better use of existing resources in a sustainable way]. [That can be achieved by the international community through a number of mechanisms that would:]

(a) Provide to small island developing States concessional financial and technical assistance, and grant assistance, at the levels, in real terms, necessary to support their sustainable development;

[(b) Maximize the access of small island developing States to concessional financial and technical assistance taking into account, inter alia, their specific development needs and challenges as outlined in the programme of action for the sustainable development of small island developing States as well as the national priorities of those States;]

[(c) Review, and revise as appropriate, the mechanisms, criteria and procedures used in allocating and providing concessional resources to small island developing States within multilateral and bilateral programmes to improve their effectiveness, taking into account the special needs, the sustainable development potential and the prospects for increased small island developing States' contributions to global sustainability through increased resources;]

[(d) Ensure that financial and technical assistance conforms to the national and, where appropriate, regional priorities of small island developing States;]

[(e) Provide support to small island developing States to enable them to achieve economic growth and sustainability.]

[89. The programme of action recognizes that the recommendations and commitments of UNCED regarding funding fall significantly short of expectations and requirements, and that the future implementation of the programme of action depends on the success of the Inter-sessional Ad Hoc Open-Ended Working Group on Finance of the Commission on Sustainable Development in achieving its mandate to

review and advance innovative approaches that will open up new avenues and develop new ideas for financing Agenda 21 in a spirit of global partnership for sustainable development. 8/]

2. Trade

90. In order to achieve sustained economic growth and sustainable development, small island developing States need to develop overseas markets for value-added exports in areas in which they are internationally competitive. In addition, many small island developing States are dependent on the international commodity markets for a major proportion of their export receipts. Poor market access and reliance on a single commodity are among problems faced by many small island developing States. The need for a supportive international economic climate and an open and non-discriminatory trading system is essential, as demonstrated by the conclusion of the Uruguay Round, to the sustained economic growth and sustainable development of the small island developing States. Trade liberalization, with a view to enhancing the access to markets for the exports of small island developing States is particularly important.

[91. Given their limited possibilities of generating local value-added, rules of origin criteria should be flexibly defined for small island developing States to include a relatively higher proportion of third-country inputs in the manufacture of their exports, and by instituting a system of derogations from rules considered restrictive for sufficiently long periods of time to establish production and export markets.]

92. The international community should seek to develop better functioning and transparent international commodity markets; [of providing greater diversification of the commodity sector in small island developing States [within a macroeconomic framework] that takes into account a country's economic structure, resource endowments and market opportunities;] [and of providing better management of national resources that takes into consideration the necessity of sustainable development, including the importance of mutually supportive trade and environment policies.] [In that connection, the fulfilment of measures designed under paragraph 2.16 of Agenda 21 is relevant to the sustainable development of small island developing States.] [The international community should also assist small island developing States in achieving greater diversification of their commodity sectors within a macroeconomic framework that takes into account a country's economic structure, resource endowments and market opportunities and which embraces mutually supportive trade and environment policies.]

[93. In that context, a study should be undertaken on the effects of trade liberalization and globalization on the sustainable development of small island developing States, including relevant recommendations for ameliorating any negative impacts.]

3. Transfer of environmentally sound technologies, cooperation and capacity-building

94. The transfer of environmentally sound technologies, cooperation and capacity-building, technical cooperation among developing countries, including among small island developing States, and the development and use of indigenous technology constitute a crucial process for achieving sustainable development in small island developing States. In particular, the promotion of and access to environmentally sound technologies is a key requirement for enhancing the endogenous capacity of small island developing States.

95. In the context of small island developing States, there is a particular need to focus on the dissemination of information regarding available technology; improving the endogenous capacity of small island developing States to absorb, manage and utilize environmentally sound technologies through, inter alia, education and training; and promoting, facilitating and financing access to and the transfer of environmentally sound technologies [, including state-of-the-art technology, as well as corresponding know-how on concessional and preferential terms [, as mutually agreed] [, taking into account the need to protect intellectual property rights of resource owners] [and the special needs of developing countries]].

96. The fulfilment by Governments and the international organizations of measures described in paragraph 34.18 of Agenda 21 is also of critical importance to small island developing States.

(a) Information

97. The use of the existing, as well as the establishment of, collaborative networks of subregional and regional research and information systems, in particular mechanisms to facilitate access by small island developing States to information, should be supported.

98. Information on environmental emergencies that may result from poor or inappropriate application or technologies and early warning information aimed at preventing natural and environmental disasters should be disseminated.

99. [The Executive Council of UNDP should be requested to consider] UNDP should be charged with the responsibility of coordinating a feasibility study in collaboration with the small island developing States for the implementation of a small island developing States information network (SIDS/NET). Such a study should be completed before the commencement of the forty-ninth session of the United Nations General Assembly.

100 bis. To develop a small island developing States technical assistance programme (SIDS/TAP) to promote inter- and intraregional cooperation on sustainable development, UNDP should be charged with the responsibility of coordinating a feasibility study in collaboration with small island developing States. An integral component of SIDS/TAP should be the compilation of a directory of institutions and scholars with recognized expertise in the sustainable development of small island developing States. The study and the

initial compilation of the directory should be completed before the commencement of the forty-ninth session of the United Nations General Assembly.

101 ter. To support small island developing States identify and develop facilities for eco-tourism, nature and cultural tourism, as identified in chapter VIII A (iii) and C (i) and consistent with current approaches to conserve biological diversity in small island developing States, relevant international organizations, in particular the International Union for the Conservation of Nature (IUCN) and the United Nations Educational, Scientific and Cultural Organization (UNESCO) should, in close collaboration with small island developing States and through their relevant regional organizations, facilitate the listing of areas within small island developing States for listing under natural and cultural provisions of the World Heritage Convention. Those areas, and other conserved using community-based, participatory approaches, would form the basis of small island developing States/Heritage - a comprehensive network/trail of sites of natural and cultural significance throughout small island developing States.

(b) Capacity-building

102. The national capacities of small island developing States to assess, manage, absorb and utilize new technologies should be strengthened. In that context, the existing administrative infrastructure would have to be strengthened so as to train personnel at all levels and educate the end-users of those technologies. The process should include training and skills development, especially for women, youth and indigenous peoples.

103. Small island developing States should cooperate among themselves and with other developing countries that are in a position to do so with a view to developing and improving environmentally sound technologies. The international community should extend its full support to initiatives aimed at promoting technology cooperation and capacity-building among small island developing States and other developing countries.

[104. The Commission on Sustainable Development plays an important role in monitoring and focusing on proposals for mechanisms to promote the transfer, use and dissemination of environmentally sound technologies that should be explored in the implementation of the programme of action.]

(c) Finance

105. Bilateral and multilateral donors should [endeavour to] increase their financial support at the national, regional and international levels for activities that are designed to promote and facilitate the transfer of environmentally sound technologies and capacity-building to small island developing States.

4. Legislation and training

106. International environmental law is an increasingly complex subject that requires careful analysis with respect to its applicability to, and integration with, national law. Regional and international programmes to enhance the capacity of small island developing States to develop and implement appropriate national environmental legislation are very important. That should include support for small island developing States:

(a) For training, including in all aspects of environmental law and, where applicable, customary law;

(b) To strengthen their capacity to participate effectively in the negotiation of new or revised agreements or instruments;

(c) In national efforts to implement international agreements or instruments.

5. Institutional arrangements

[107. A specific [existing] [international] funding mechanism [will be necessary to] [should] direct the substantial resources required to effectively address the specific needs and concerns of small island developing States.]

[Existing international funding mechanisms should ensure that resources are made available.]

[A specific international mechanism will be necessary to ensure that all available resources are effectively applied to address the specific needs and concerns of small island developing States.]

[108. [The Department for Policy Coordination and Sustainable Development of the United Nations Secretariat, drawing upon the expertise of the focal point for the Global Conference that has already been established, should devote the necessary expertise and resources to:]

[The focal point for the Global Conference which has been established within the Department for Policy Coordination and Sustainable Development of the United Nations should become a unit with the necessary expertise and resources to research and respond to:]

[A position should be allocated within the Department for Policy Coordination and Sustainable Development of the United Nations Secretariat to assist with the implementation of the Conference outcomes. That position would:]

(a) Act as liaison and focal point between United Nations agencies, regional commissions and Governments on implementation of the Conference outcomes;

(b) [Assist the coordination of] coordinate United Nations system-wide activity in relation to the implementation of the Conference outcomes;]

(c) [Assist the preparation of] prepare appropriate reports for the Commission on Sustainable Development on United Nations system-wide implementation of the Conference outcomes [drawing on the inputs of relevant agencies.]

[109. In the context of the overall reporting requirements for the Commission on Sustainable Development] In that context, all States and relevant organs, organizations and bodies of the United Nations, as well as other organizations and groups, are invited to provide information on action taken to implement the programme of action.

[110. The governing body of the United Nations Conference on Trade and Development (UNCTAD) should be invited to consider whether] Adequate resources should be provided to UNCTAD to allow it to strengthen its capacity to carry out its mandate, and in particular to provide the research and analysis necessary to complement the work of [the unit/focal point].

[111 ter. In order to promote effective coordination a specific Subcommittee should be established by the Inter-Agency Committee on Sustainable Development (IACSD) to consider follow-up and implementation of the Conference outcomes by the United Nations system.]

112. In the implementation of the programme of action, all relevant organs, programmes and organizations of the United Nations system have an important role within their respective areas of expertise and mandates in supporting and supplementing national efforts. The relevant programmes being carried out by the United Nations system and the relevant regional and multinational organizations in the regions and individual countries should be recognized, consolidated and expanded or rationalized, as appropriate. Initiatives to promote economies of scale through integration should also be encouraged. Where applicable, the common objectives of members of regional integration arrangements should be taken into account.

[113. As provided in paragraph 38.21 of Agenda 21, the United Nations Environment Programme (UNEP) should continue to assist small island developing States by providing policy guidance and coordination in the field of the environment, noting in particular the importance of the regional seas programme to small island developing States.]

[114. As provided in paragraph 38.29 of Agenda 21, UNDP should act as the lead agency in organizing United Nations system efforts towards capacity-building at the local, national and regional levels and in fostering the United Nations collective thrust in support of the implementation of the programme of action through its network of field offices.]

115. Donors should utilize appropriate international coordination mechanisms to focus attention on the special needs of small island developing States.

[116. To facilitate the coordination and implementation of the programme of action, a consultative process should be implemented within each region through existing appropriate mechanisms, including donors, recipients, relevant United Nations agencies and, as appropriate, regional and subregional organizations, including regional commissions, non-United Nations regional organizations, especially regional, intergovernmental, technical and economic organizations and regional banks. Appropriate arrangements for participation of non-governmental organizations should be made.]

6. Vulnerability index

117. Small island developing States, in cooperation with national, regional and international organizations and research centres, should continue work on the development of vulnerability indices and other indicators that reflect the status of small island developing States and integrate ecological fragility and economic vulnerability. [Such an index could be used to supplement GNP per capita statistics with quantitative indicators of fragility.]

[118. In that respect, [the relevant international organizations] could utilize their capacity to support the development of the index. An expert group should be appointed to update and compile the index on an annual basis. The expert group should include a small number of scholars and representatives of international organizations which have at their disposal the data required to compile the vulnerability index.]

[In that regard, appropriate expertise should be utilized in the development of the index. Such expertise could include scholars and representatives of international organizations.]

D. Monitoring and review

[119. A second Global Conference within five years, convened in accordance with chapter 17G of Agenda 21, will undertake a comprehensive review of the degree of success in enhancing the sustainable development of small island developing States, with recommendations, where necessary, for amending the programme of action and providing means of implementing it.]

[120. A full review of the implementation of Conference outcomes should be undertaken by the Commission on Sustainable Development by [1999]. In preparation for that review, the Secretary-General [should report annually to the Commission] on the implementation of the programme of action. That report should include a report on system-wide coordination and reports from the relevant regions. The Commission should include in its agenda an item entitled "Implementation of the outcome of the Global Conference on the Sustainable Development of Small Island Developing States".]

Notes

1/ Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992, vol. I, Resolutions Adopted by the Conference (United Nations publication, Sales No. E.93.I.8 and corrigendum), resolution 1, annex II.

2/ Ibid., annex I.

3/ UNEP/190/4 (forthcoming United Nations Treaty Series publication).

4/ United Nations, Treaty Series, vol. 1046, No. 15749, p. 120.

5/ See Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships (United Nations, Treaty Series, vol. 1340, No. 22484), p. 263.

6/ DPI/1307.

7/ United Nations publication, Sales No. E.83.V.5.

8/ See E/CN.17/ISWG.II/1994/2.